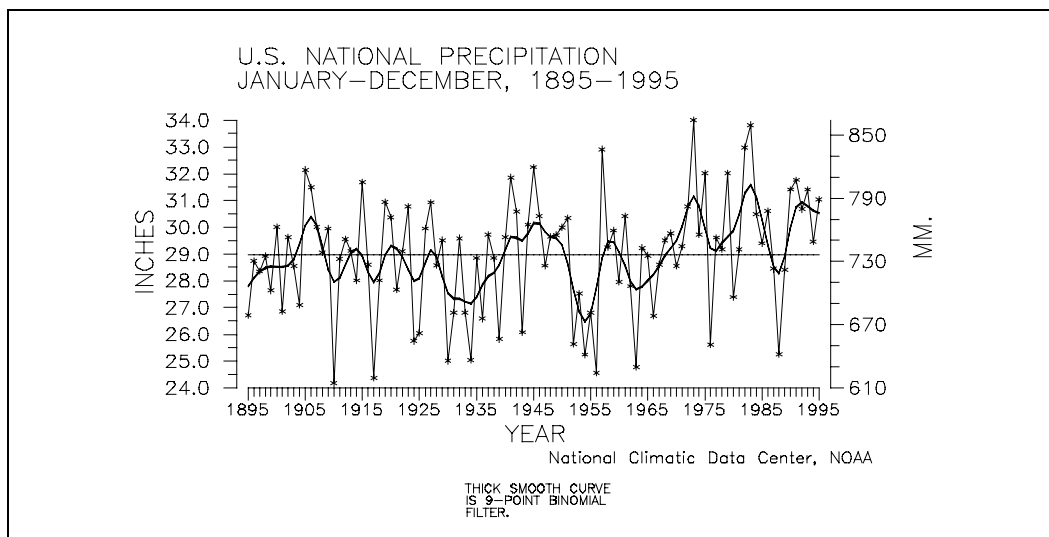
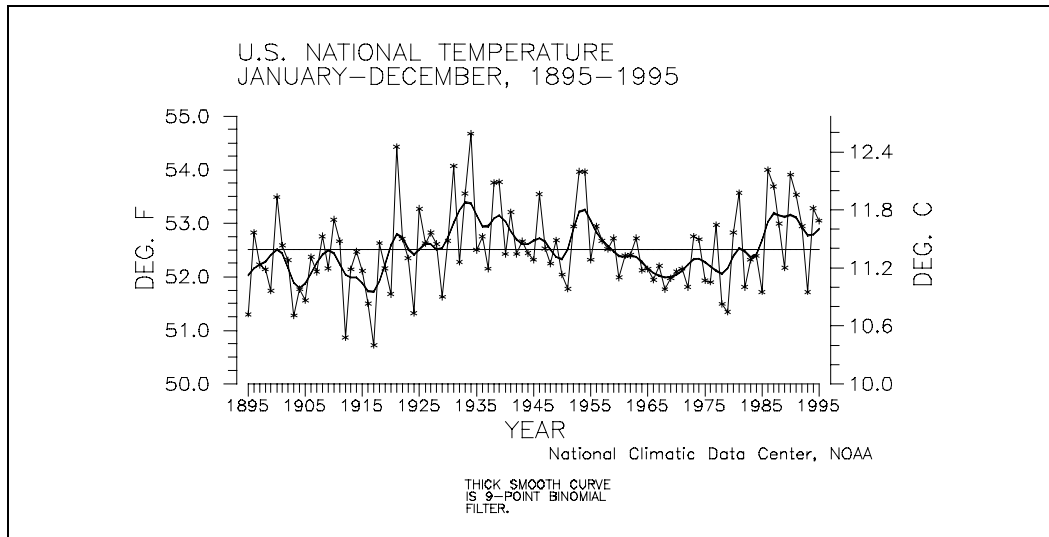


CLIMATE VARIATIONS BULLETIN



This CLIMATE VARIATIONS BULLETIN (CVB) is a preliminary report that puts current monthly climate anomalies into historical perspective using climate databases archived at the National Climatic Data Center (NCDC). It is issued on a monthly basis. Supplemental sections are included which address seasonal and annual perspectives, when appropriate.

Current data are based on preliminary reports from First and Second Order airport stations obtained from the National Weather Service (NWS) Climate Analysis Center, and preliminary tornado statistics obtained from the NWS National Severe Storms Forecast Center. **THE CURRENT DATA SHOULD BE USED WITH CAUTION.** These preliminary data are useful for estimating how current anomalies compare to the historical record, however the actual values and rankings for the current year will change as the final data arrive at NCDC and are processed.

The following NCDC datasets are used for the historical data: the climate division drought database (TD-9640), the hurricane datasets (TD-9636 and TD-9697), the tornado dataset (STORM DATA), and the monthly station dataset (LCD supplemental files). It should be noted that the climate division drought database consists of monthly data for 344 climate divisions in the contiguous United States. These divisional values are calculated from the 6000+ station Cooperative Observer network.

The narrative, tables, and graphs in the CVB are also available via automated facsimile. The previous month's summary can be obtained after the tenth of the month by dialing 704-271-4570 and selecting the appropriate menu codes. A touch-tone fax machine is required.

If you have access to the Internet, copies of the CVB are available via both the NCDC's World Wide Web (WWW) server and the NCDC's anonymous FTP server.

NCDC's WWW server

URL for the CVB: <http://www.ncdc.noaa.gov/publications/cvb/cvb.html>

NCDC's anonymous FTP server

Machine: <ftp.ncdc.noaa.gov>

Directory: [/pub/data/cvb](ftp://ftp.ncdc.noaa.gov/pub/data/cvb)

If you are a climate researcher and would like to order copies of the historical datasets used to make graphs of the type in this report, call 704-271-4994 or fax a letter to 704-271-4876 or mail a letter to the address given below, ATTN: Research User Services.

All other questions or requests for data should be made by calling 704-271-4800 or sending a fax to 704-271-4876 or by writing to:

National Climatic Data Center, NOAA
Federal Building
151 Patton Avenue, Room 120
Asheville, NC 28801-5001

If you use any of the information from this CVB, please identify "National Climatic Data Center, NOAA" as the source.

UNITED STATES DECEMBER CLIMATE IN HISTORICAL PERSPECTIVE

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Preliminary data for December 1995 indicate that temperature averaged across the contiguous United States was above the long-term mean (see Figure 1). December 1995, with an averaged temperature of 33.9° (F), ranked as the 47th warmest December since national records began in 1895. The 1995 value is based on preliminary data, which has been shown to be within 0.26°F (0.14°C) of the final data over a 46-month period. This confidence interval is indicated in the figure by '+'. The darker smooth curve is a nine-point binomial filter that averages out the year-to-year fluctuations and shows the longer-term variations. Roughly twelve percent of the country averaged much warmer than normal while none of the country averaged much cooler than normal for December 1995.

With an areally-averaged national precipitation value of 1.79 inches, December 1995 was the 26th driest December on record. The preliminary value for precipitation is estimated to be accurate to within 0.14 inches (3.56 millimeters) and the confidence interval is plotted in Figure 2 as a '+'. Nearly a sixth (16.3%) of the country experienced much drier than normal conditions while only 1.9% was much wetter than normal. December 1995 marked the third consecutive December with precipitation below to well below the long-term mean.

Historical precipitation is shown in a different way in Figure 3. The December precipitation for each climate division in the contiguous U.S. was first standardized using the gamma distribution over the 1931-90 period. These gamma-standardized values were then weighted by area and averaged to determine a national standardized precipitation value. These national weighted values were then normalized over their period of record. Negative values are drier and positive values are wetter than the mean. This index gives a more accurate indication of how precipitation across the country compares to the local normal (60-year average) climate. The national standardized precipitation ranked December 1995 as the 12th driest such month on record.

In order to show more of a historical perspective, the precipitation and temperature rankings for the periods December 1995, November-December 1995, July-December 1995, and January-December 1995 for the nine climatically homogeneous regions, as well as the national rankings, are listed in Table 1.

The regional rankings for temperature for the month of December indicate that temperatures were cooler than normal for the eastern third and warmer than normal for the western third of the country. It was the 9th warmest December for the West region (Figure 4) and the 16th warmest December on record for the Southwest region. December 1995 was the 21st coolest December on record for the Southeast region (Figure 5) and the 22nd coolest such month for the Northeast region.

December 1995 was the seventh driest such month on record for the Southwest region and completed the sixth driest such two-month period on record. For the six-month period, July through December, the Southwest region had the fourth driest such period since 1895. December was also the 13th driest such month for the Northeast region and the 16th driest for the West-North Central region (Figure 6). December 1995 was the 31st wettest such month on record for the West region (Figure 7).

Precipitation across the Primary Hard Red Winter Wheat Belt for the first three months of the growing season averaged much below normal for the October through December 1995 growing season-to-date and now stands at near-record lows (Figure 8).

Figure 9A shows, in illustrative map form, the December 1995 temperature rankings for the 48 contiguous states. No state was within the top ten coolest category of the historical distribution for the month of December while nineteen states were within the cool third of the distribution. It was the tenth warmest December on record for Wyoming and the ninth warmest December on record for California.

Eight other states were within the warm-third of the historical distribution.

December 1995 state ranks for precipitation are shown in Figure 9B. It was the driest December on record for Iowa, third driest for Colorado and Wyoming, seventh driest for Nebraska and North Carolina, and the ninth driest December since 1895 for Pennsylvania. Twenty-five other states were within the dry third of the historical distribution. No state was within the top ten wet portion of the distribution, however four were within the wet-third of the distribution. It must be stressed that, when the final values for precipitation are calculated, these ranks *WILL* change due to the use of a denser station network. ***It should also be noted that the December state precipitation ranks are preliminary and should be used with considerable caution due to the high variability of precipitation on a small space and time scale.***

Long-term drought coverage in the United States during December remained roughly the same as November while the area of the country experiencing severe to extreme wetness dropped roughly three percent. Nationally, long-term drought conditions (as defined by the Palmer Drought Index) for December 1995 decreased to about 1.5% of the country while the percent coverage of severe to extreme wet area fell to about an eighth of the country (Figure 10). Table 2 lists the precipitation ranks and statistics for selected river basins for the 1994-1995 Hydrologic Year. The core wet areas included the northern Great Plains, upper Mississippi valley, upper Great Lakes region, northern and central High Plains, the northern Rockies, the Great Basin, the interior Northwest, and portions of the Southeast. The Palmer dry areas included portions of the Northeast and Ohio valley regions, the Desert Southwest, parts of the southern High Plains, and lower and mid Mississippi valley regions.

Table 3 shows extremes, 1961-90 normals, and the December 1995 values for both precipitation and temperature for the nine regions and the contiguous U.S.

According to preliminary data from the National Weather Service's National Severe Storms Forecast Center, there were 19 tornadoes across the contiguous United States in December 1995. The 1953-1994 average tornado count for December is 18. Extremes for December include a minimum of 0 tornadoes in 1963 and 1989, and a maximum of 95 in 1982.

UNITED STATES ANNUAL CLIMATE IN HISTORICAL PERSPECTIVE

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Preliminary annual (January-December) data for 1995 indicate that temperature averaged across the contiguous United States was above the long-term mean (Figure 11), ranking as the 20th warmest year on record (Table 1). About one ninth (11.6%) of the country averaged much warmer than normal while none of the country averaged much cooler than normal for the year when annual averaged temperatures are considered.

Areally-averaged annual precipitation for the nation was above the long-term mean, ranking 1995 as the 15th wettest year in the 101-year record (Table 1). By this measure, 1995 continued the pattern of above to well above normal annual national overall precipitation that has occurred since 1990 (Figure 12). The national standardized precipitation index (Figure 13) ranked 1995 as the 26th wettest year on record. (The preceding monthly report explains how this index is computed.) An eighth (12.6%) of the contiguous U.S. averaged much wetter than normal for January-December 1995, while 1.6% experienced much drier than normal conditions.

The temperature and precipitation ranks for January-December 1995 for the nine climatically homogeneous regions in the United States are listed in Table 1. The average annual temperature pattern was characterized by a simple ridge-trough pattern, with unusual warmth in the west and temperatures in the moderate range east of the Rockies. The preliminary data indicate that the Southwest region had the seventh warmest year on record in 1995, which continues an eleven-year pattern of near to well above average temperatures (Figure 14). The West region ranked eighth warmest and Northwest tenth warmest (Table 1). The remaining regions ranked in the middle third of the historical distribution, with the Southeast having the lowest rank at 39th coolest (Figure 15).

The annual precipitation for 1995 showed somewhat of a patchwork pattern. Conditions were unusually dry in the Northeast, which had a regional rank of 18th driest (Figure 16). The year averaged unusually wet along the west coast to the northern

Plains and Great Lakes, and in the Southeast. Both the West and Northwest regions had the fifth wettest year on record, with 1995 breaking a ten-year string of near to well below normal years in the Northwest (Figure 17). The year ranked seventh wettest in the West North Central region (Table 1). Annual precipitation ranked in the middle third of the historical distribution from the Southwest to the Central regions.

Table 4 shows extremes, 1961-1990 normals, and the 1995 annual values for both precipitation and temperature for the nine regions and the contiguous U.S.

On a statewide basis, five states (AZ, CA, NM, OR, UT) ranked in the top ten warmest category for January-December 1995, and four states (CA, ID, OR, SD) ranked in the top ten wettest category, with California and Oregon in both categories (Figures 18A and 18B). No states were in the top ten coldest or top ten driest categories. The annual precipitation ranks for the 18 river basins in the contiguous United States are shown in Table 5.

According to preliminary data from the National Weather Service's National Severe Storms Forecast Center, there were 1197 tornadoes across the contiguous United States during 1995 (Figure 19). The 1953-1994 average annual tornado count is 798. The extremes: 1302 tornadoes in 1992 and 421 in 1953. It should be noted that the preliminary tornado count is generally higher than the final count and that the tornado observations have generally improved with time as better observing practices and instrumentation (especially weather radar and satellites) were utilized.

A monthly breakdown of national temperature and precipitation conditions for 1995 is shown in Figures 20 and 21. A tenth or more of the contiguous United States was much warmer than normal during three months in 1995, with a third very warm in February and over 40% very warm in August (Figure 20). Five months had a tenth or more much colder than normal.

A tenth or more of the nation was much wetter than normal during seven months in 1995, with May having a third of the contiguous United States very wet (Figure 21). Three months had a tenth or more much drier than normal. The national wet conditions peaked in May and steadily decreased in subsequent months (Figure 21, bottom graph).

According to data from the National Hurricane Center, the 1995 hurricane season in the North Atlantic basin was one of the most active on record. There were 11 hurricanes and eight tropical storms in 1995 for a total of 19, which was surpassed in this century only by 1933 which had 21 hurricanes and tropical storms (Figure 22, top graph). There were 63 hurricane days (full and partial) in 1995. Only eleven other years had more hurricane days, with 1893 holding the record of 93 (Figure 22, bottom graph).

TABLE 1. PRECIPITATION AND TEMPERATURE RANKS, BASED
ON THE PERIOD 1895-1995. 1 = DRIEST/COLDEST,
101 = WETTEST/WARMEST FOR DECEMBER 1995,
101 = WETTEST/WARMEST FOR NOV-DEC 1995,
101 = WETTEST/WARMEST FOR JUL-DEC 1995,
101 = WETTEST/WARMEST FOR JAN-DEC 1995.

REGION	DEC 1995	NOV-DEC 1995	JUL-DEC 1995	JAN-DEC 1995
-----	----	-----	-----	-----
PRECIPITATION:				
NORTHEAST	13	38	62	18
EAST NORTH CENTRAL	29	41	76	71
CENTRAL	23	21	21	54
SOUTHEAST	19	37	78	73
WEST NORTH CENTRAL	16	20	77	95
SOUTH	42	31	23	53
SOUTHWEST	7	6	4	53
NORTHWEST	60	80	78	97
WEST	71	36	13	97
NATIONAL	26	22	35	87
TEMPERATURE:				
NORTHEAST	22	9	41	65
EAST NORTH CENTRAL	42	11	25	49
CENTRAL	33	12	33	49
SOUTHEAST	21	9	24	39
WEST NORTH CENTRAL	52	60	51	65
SOUTH	56	59	58	58
SOUTHWEST	86	100	99	95
NORTHWEST	73	96	84	92
WEST	93	99	96	94
NATIONAL	55	52	74	82

TABLE 2.

STATISTICS FOR SELECTED RIVER BASINS: PRECIPITATION RANKING FOR OCT-DEC 1995, WHERE RANK OF 1 = DRIEST, 101 = WETTEST, BASED ON THE PERIOD 1895 TO 1995, AREAL PERCENT OF THE BASIN EXPERIENCING SEVERE OR EXTREME LONG-TERM (PALMER) DROUGHT, AND AREAL PERCENT OF THE BASIN EXPERIENCING SEVERE OR EXTREME LONG-TERM (PALMER) WET CONDITIONS, AS OF DECEMBER 1995. RIVER BASIN REGIONS AS DEFINED BY THE U.S. WATER RESOURCES COUNCIL.

RIVER BASIN -----	PRECIPITATION RANK -----	% AREA DRY -----	% AREA WET -----
MISSOURI BASIN	29	.0%	29.0%
PACIFIC NORTHWEST BASIN	81	.0%	41.3%
CALIFORNIA RIVER BASIN	29	.0%	.0%
GREAT BASIN	1	.0%	18.2%
UPPER COLORADO BASIN	2	.0%	.0%
LOWER COLORADO BASIN	7	22.0%	.0%
RIO GRANDE BASIN	9	.0%	3.9%
ARKANSAS-WHITE-RED BASIN	10	5.1%	5.8%
TEXAS GULF COAST BASIN	18	.0%	.0%
SOURIS-RED-RAINY BASIN	94	.0%	55.7%
UPPER MISSISSIPPI BASIN	54	2.9%	19.4%
LOWER MISSISSIPPI BASIN	41	.0%	3.1%
GREAT LAKES BASIN	92	.0%	13.1%
OHIO RIVER BASIN	40	.0%	.0%
TENNESSEE RIVER BASIN	71	.0%	.0%
NEW ENGLAND BASIN	94	.0%	.0%
MID-ATLANTIC BASIN	92	.0%	.0%
SOUTH ATLANTIC-GULF BASIN	88	.0%	23.3%

TABLE 3. EXTREMES, 1961-90 NORMALS, AND 1995 VALUES
FOR DECEMBER

REGION	PRECIPITATION (INCHES)				NORMAL PCPN	1995 PCPN
	DRIEST VALUE	YEAR	WETTEST VALUE	YEAR		
NORTHEAST	.98	1955	6.74	1973	3.45	2.06
EAST NORTH CENTRAL	.37	1943	2.62	1982	1.44	.97
CENTRAL	.90	1958	7.58	1990	3.44	2.07
SOUTHEAST	1.18	1955	7.05	1953	3.87	2.48
WEST NORTH CENTRAL	.19	1986	1.20	1917	.65	.38
SOUTH	.64	1917	5.51	1911	2.49	2.24
SOUTHWEST	.11	1929	2.29	1965	.96	.24
NORTHWEST	1.17	1976	8.29	1964	4.03	4.16
WEST	.09	1989	7.05	1955	2.33	3.10
NATIONAL	1.22	1958	3.60	1982	2.30	1.79
REGION	TEMPERATURE (DEGREES F)				NORMAL TEMP	1995 TEMP
	COLDEST VALUE	YEAR	WARMEST VALUE	YEAR		
NORTHEAST	13.3	1989	34.5	1923	26.6	23.5
EAST NORTH CENTRAL	6.9	1983	29.0	1923	18.6	18.3
CENTRAL	21.9	1989	42.0	1923	33.0	31.7
SOUTHEAST	39.3	1989	55.9	1931	47.3	44.6
WEST NORTH CENTRAL	4.3	1983	30.0	1939	19.4	21.7
SOUTH	33.6	1983	51.0	1933	43.5	44.8
SOUTHWEST	24.8	1909	39.9	1980	32.6	36.2
NORTHWEST	21.9	1990	37.9	1917	29.4	32.4
WEST	33.0	1990	45.6	1929	38.7	42.8
NATIONAL	25.8	1983	38.4	1939	32.8	33.9

TABLE 4. EXTREMES, 1961-90 NORMALS, AND 1995 VALUES
FOR JAN-DEC

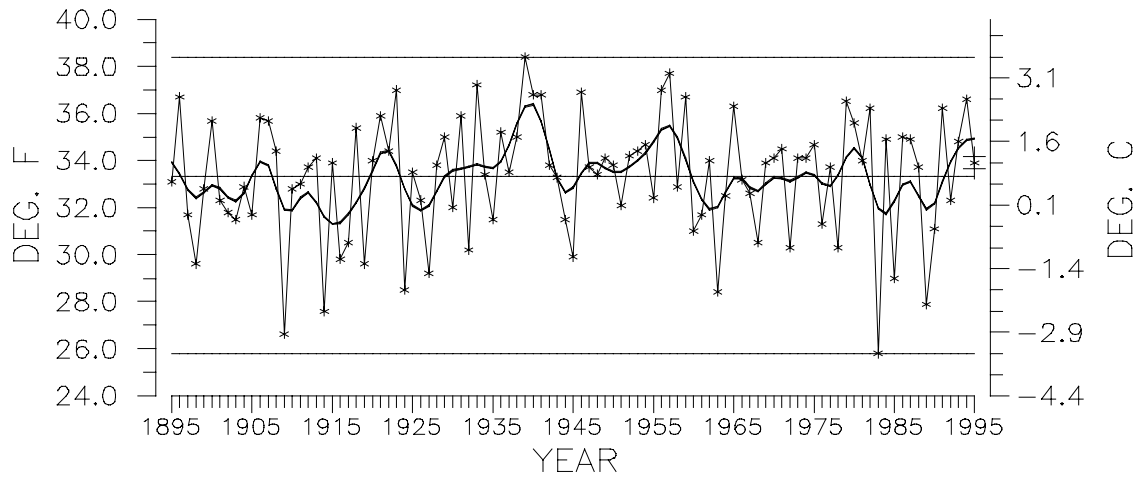
REGION	PRECIPITATION (INCHES)				NORMAL PCPN	1995 PCPN
	DRIEST VALUE	YEAR	WETTEST VALUE	YEAR		
NORTHEAST	31.77	1930	50.91	1972	41.63	37.67
EAST NORTH CENTRAL	19.81	1910	36.63	1951	30.50	31.42
CENTRAL	30.56	1930	53.38	1990	43.05	42.54
SOUTHEAST	37.56	1954	62.39	1929	51.03	53.71
WEST NORTH CENTRAL	11.49	1934	22.86	1915	16.92	20.10
SOUTH	23.40	1917	46.91	1973	35.72	35.73
SOUTHWEST	7.68	1956	22.10	1941	13.64	13.50
NORTHWEST	19.00	1929	35.57	1983	27.50	32.32
WEST	9.97	1947	31.47	1983	16.51	23.99
NATIONAL	24.17	1910	33.99	1973	29.46	31.03
REGION	TEMPERATURE (DEGREES F)				NORMAL TEMP	1995 TEMP
	COLDEST VALUE	YEAR	WARMEST VALUE	YEAR		
NORTHEAST	43.1	1904	48.9	1953	46.1	46.5
EAST NORTH CENTRAL	39.5	1917	48.0	1931	43.5	43.5
CENTRAL	50.6	1917	56.9	1921	53.2	53.4
SOUTHEAST	61.0	1901	65.0	1921	62.4	62.7
WEST NORTH CENTRAL	39.9	1916	46.7	1934	43.3	43.4
SOUTH	60.4	1979	64.9	1921	62.0	62.5
SOUTHWEST	49.5	1912	54.6	1934	51.8	53.2
NORTHWEST	44.1	1955	50.2	1934	46.7	48.1
WEST	53.0	1911	57.8	1934	55.0	56.4
NATIONAL	50.7	1917	54.7	1934	52.4	53.0

TABLE 5.

PRECIPITATION RANKS FOR JAN-DEC 1995, WHERE
 RANK OF 1 = DRIEST, 101 = WETTEST, BASED ON THE
 PERIOD 1895 TO 1995, FOR SELECTED RIVER BASINS.
 RIVER BASIN REGIONS AS DEFINED BY THE U.S. WATER
 RESOURCES COUNCIL.

RIVER BASIN -----	PRECIPITATION RANK -----
MISSOURI BASIN	86
PACIFIC NORTHWEST BASIN	96
CALIFORNIA RIVER BASIN	96
GREAT BASIN	88
UPPER COLORADO BASIN	71
LOWER COLORADO BASIN	38
RIO GRANDE BASIN	25
ARKANSAS-WHITE-RED BASIN	58
TEXAS GULF COAST BASIN	58
SOURIS-RED-RAINY BASIN	84
UPPER MISSISSIPPI BASIN	73
LOWER MISSISSIPPI BASIN	49
GREAT LAKES BASIN	54
OHIO RIVER BASIN	46
TENNESSEE RIVER BASIN	55
NEW ENGLAND BASIN	37
MID-ATLANTIC BASIN	26
SOUTH ATLANTIC-GULF BASIN	75

U.S. NATIONAL TEMPERATURE DECEMBER, 1895-1995



National Climatic Data Center, NOAA

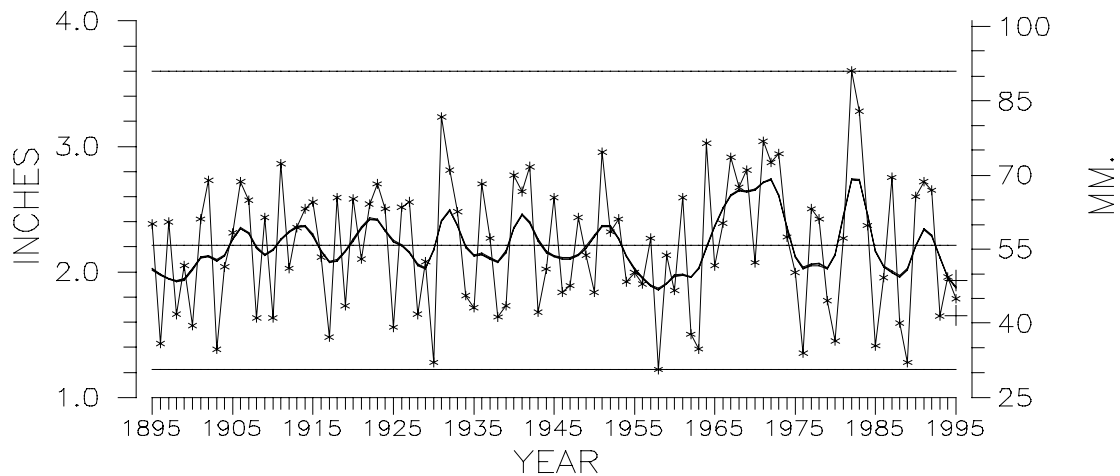
STRAIGHT HORIZONTAL LINES ARE:
MAXIMUM VALUE (TOP),
LONG-TERM AVERAGE (MIDDLE),
MINIMUM VALUE (BOTTOM)

THICK SMOOTH CURVE
IS 9-POINT BINOMIAL
FILTER.

CONFIDENCE INTERVAL
FOR CURRENT YEAR IS
INDICATED BY '+'.
+

Figure 1

U.S. NATIONAL PRECIPITATION DECEMBER, 1895-1995



National Climatic Data Center, NOAA

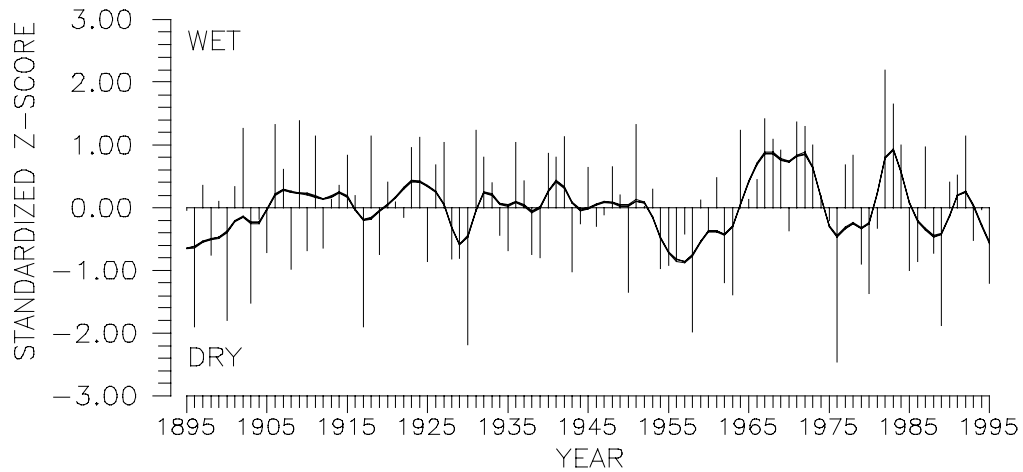
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MAXIMUM VALUE (TOP),
LONG-TERM AVERAGE (MIDDLE),
MINIMUM VALUE (BOTTOM)

THICK SMOOTH CURVE
IS 9-POINT BINOMIAL
FILTER.

CONFIDENCE INTERVAL
FOR CURRENT YEAR IS
INDICATED BY '+'.
+

Figure 2

U.S. NATIONAL NORMALIZED PRECIPITATION INDEX DECEMBER, 1895–1995

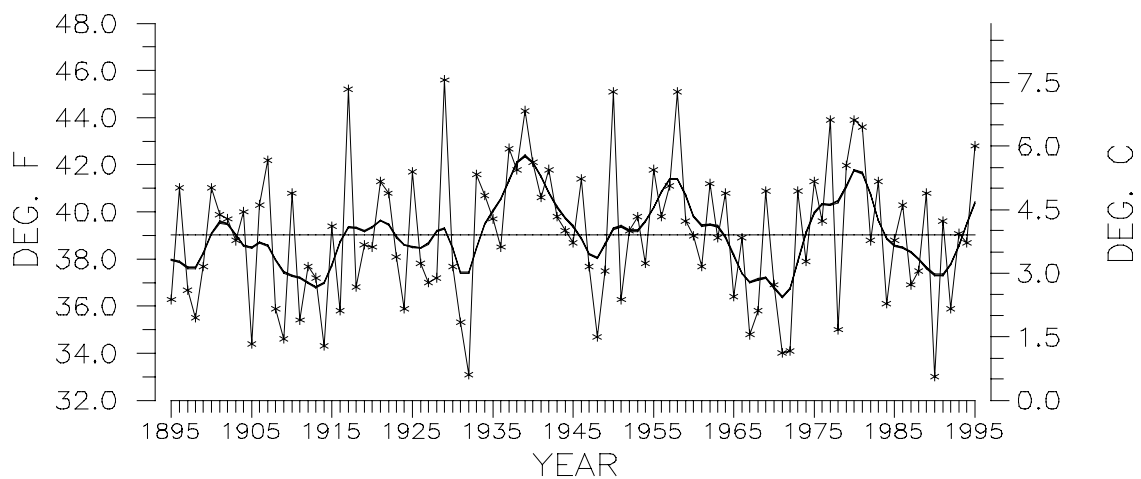


National Climatic Data Center, NOAA

THICK SMOOTH CURVE
IS 9-POINT BINOMIAL
FILTER.

Figure 3

WEST REGION TEMPERATURE DECEMBER, 1895–1995

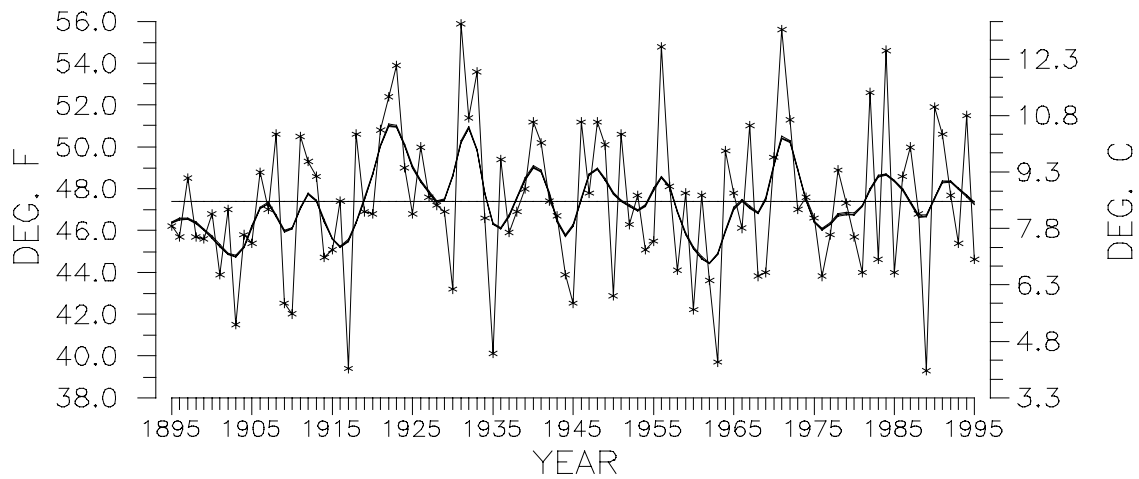


National Climatic Data Center, NOAA

THICK SMOOTH CURVE
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FILTER.

Figure 4

SOUTHEAST REGION TEMPERATURE DECEMBER, 1895-1995

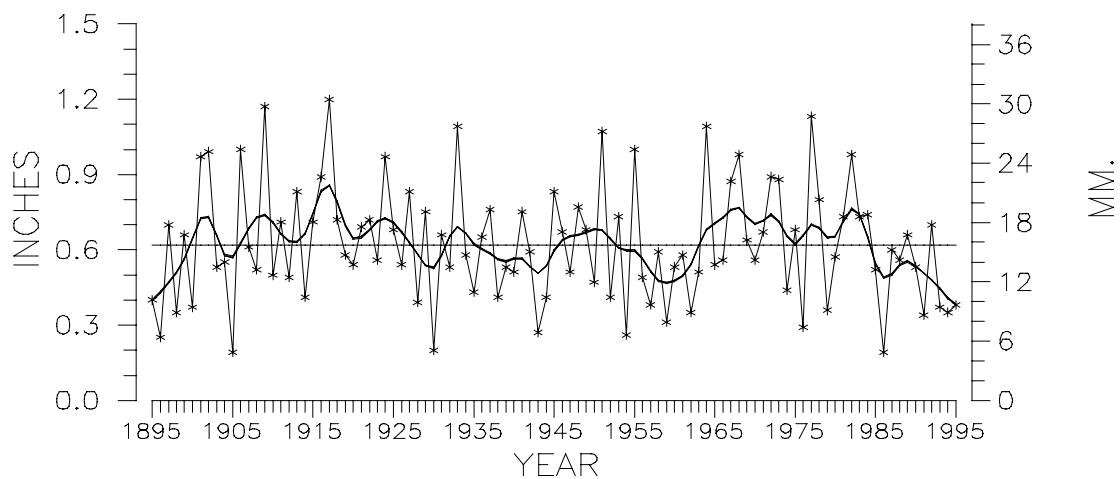


National Climatic Data Center, NOAA

THICK SMOOTH CURVE
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FILTER.

Figure 5

WEST-NORTH CENTRAL REGION PRECIPITATION DECEMBER, 1895-1995

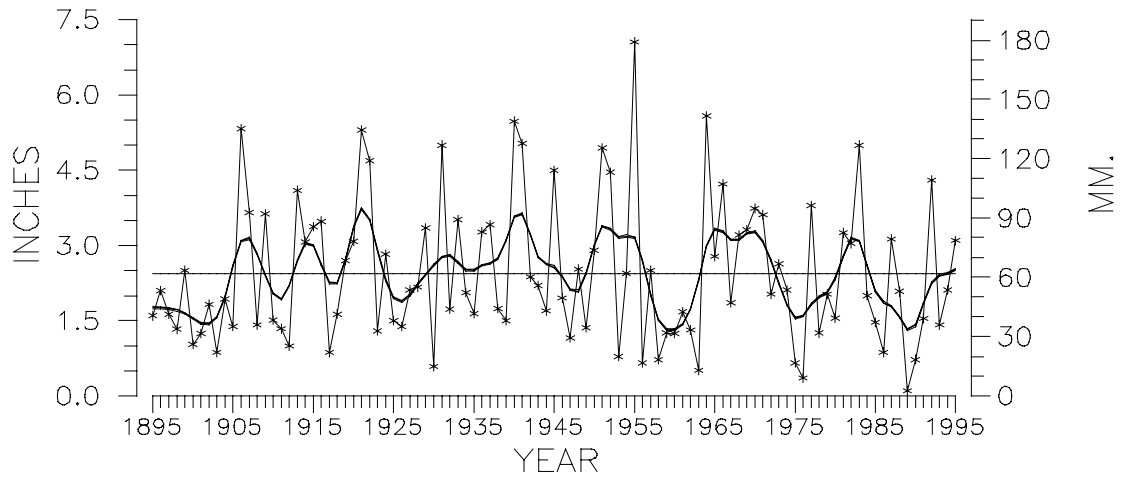


National Climatic Data Center, NOAA

THICK SMOOTH CURVE
IS 9-POINT BINOMIAL
FILTER.

Figure 6

WEST REGION PRECIPITATION
DECEMBER, 1895–1995

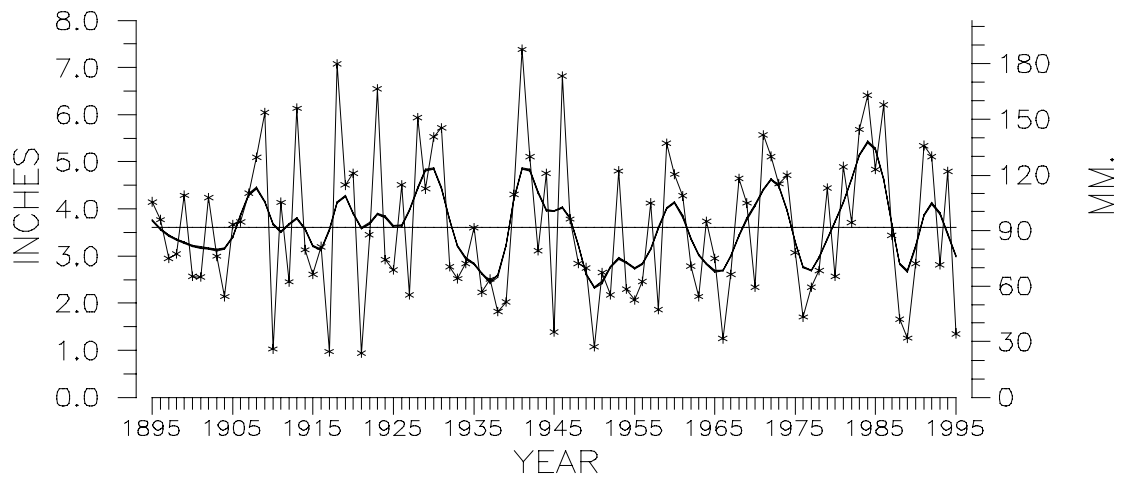


National Climatic Data Center, NOAA

THICK SMOOTH CURVE
IS 9-POINT BINOMIAL
FILTER.

Figure 7

PRIMARY HARD RED WINTER WHEAT BELT
PRECIPITATION
OCTOBER–DECEMBER, 1895–1995

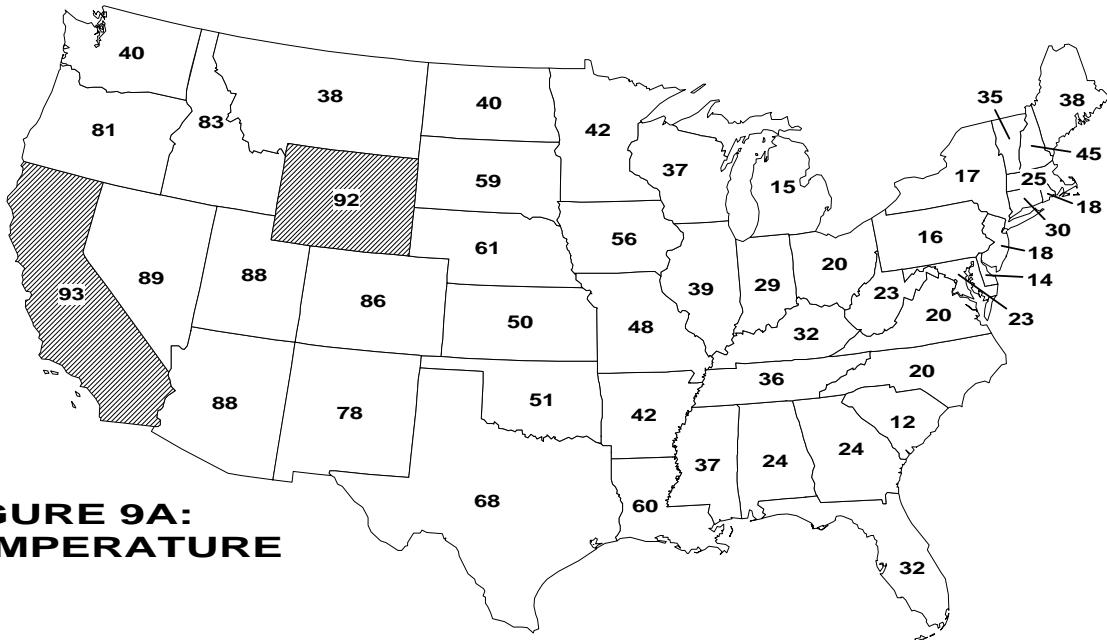


National Climatic Data Center, NOAA

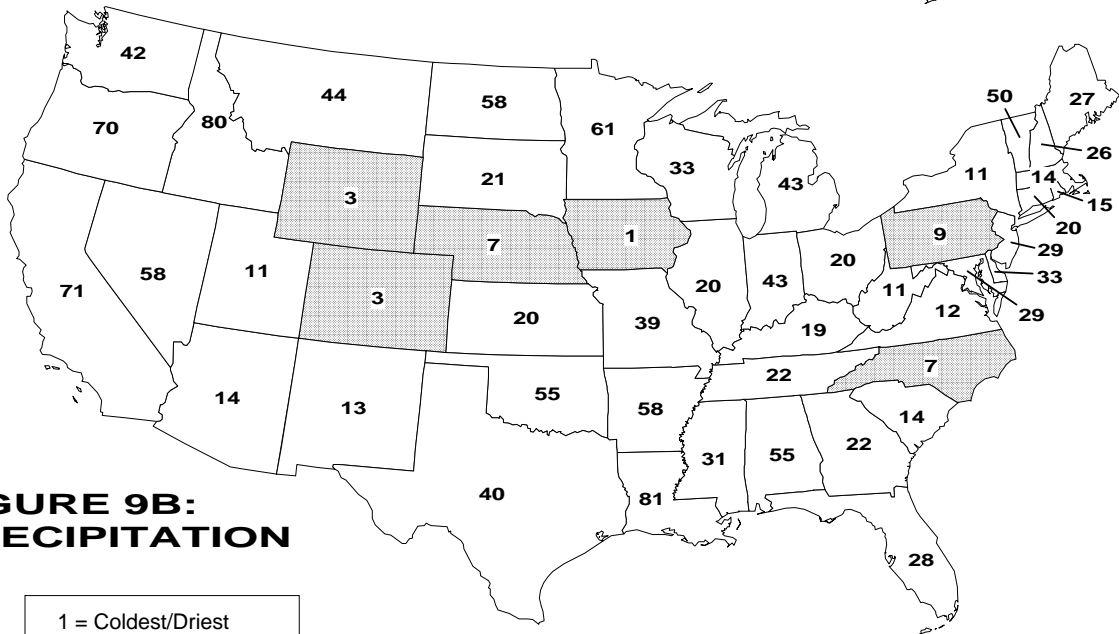
THICK SMOOTH CURVE
IS 9-POINT BINOMIAL
FILTER.

Figure 8

DECEMBER 1995 STATEWIDE RANKS



**FIGURE 9A:
TEMPERATURE**



**FIGURE 9B:
PRECIPITATION**

1 = Coldest/Driest
101 = Warmest/Wettest

National Climatic Data Center, NOAA

Temperature and Precipitation Ranks for the contiguous United States. Each state is ranked based on its data from 1895-1995. States having a rank of top ten coldest or driest (rank 1-10) or top ten warmest or wettest (rank 92-101) are shaded.

U.S. PERCENT AREA DRY AND WET

JANUARY 1991 THROUGH DECEMBER 1995

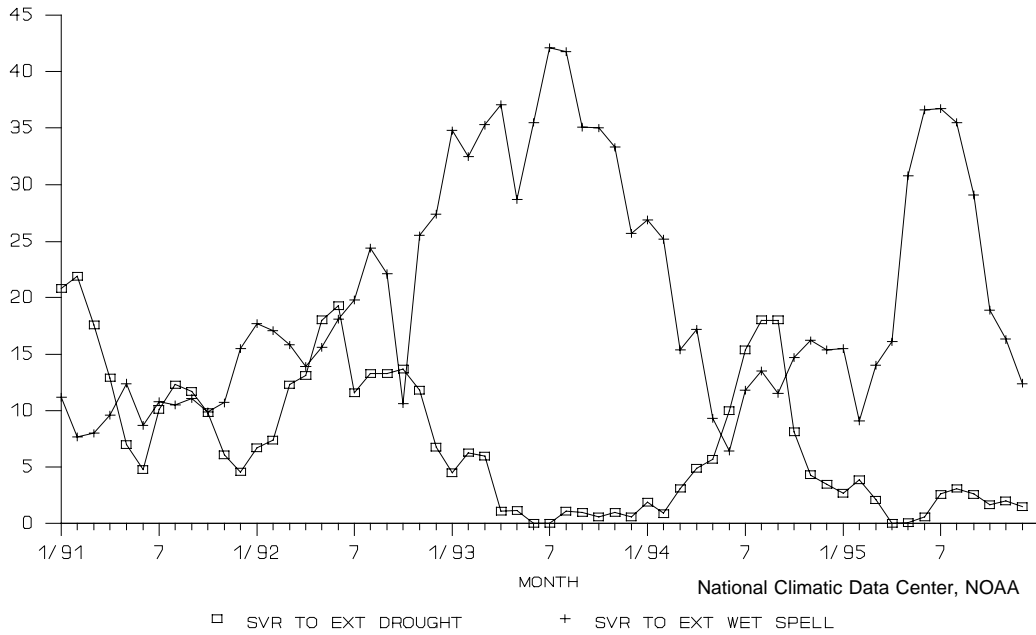


Figure 10

U.S. NATIONAL TEMPERATURE JANUARY–DECEMBER, 1895–1995

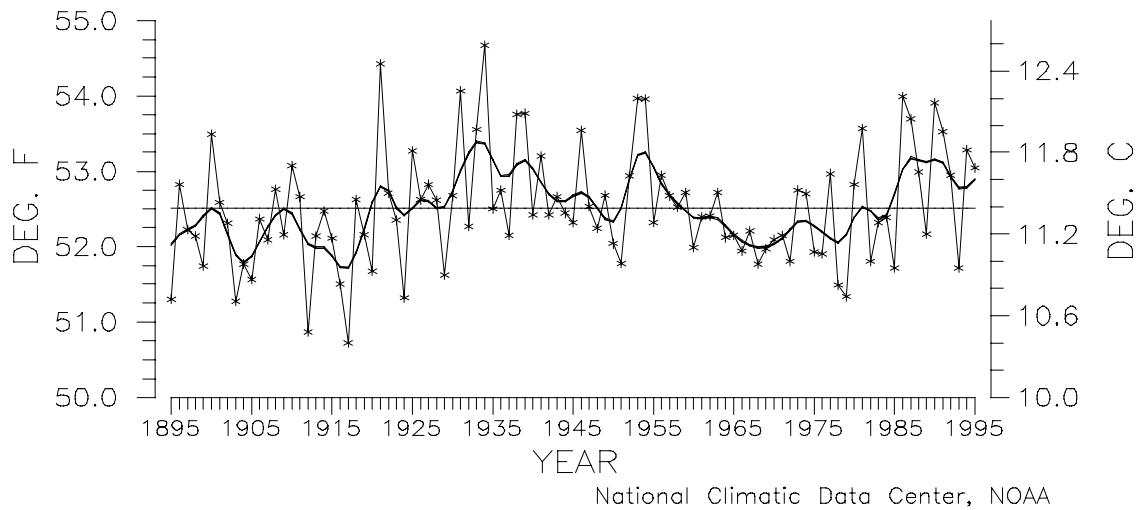
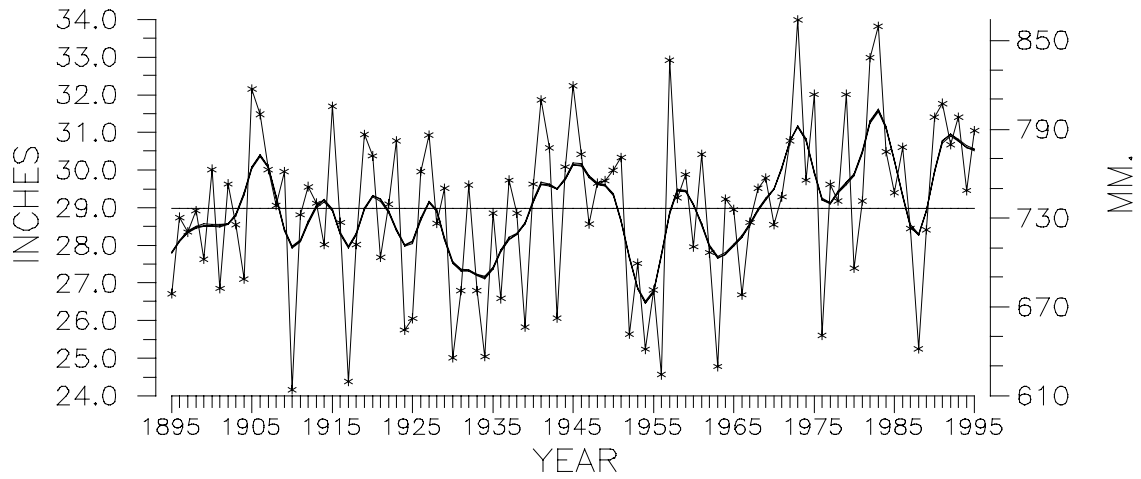


Figure 11

U.S. NATIONAL PRECIPITATION JANUARY–DECEMBER, 1895–1995

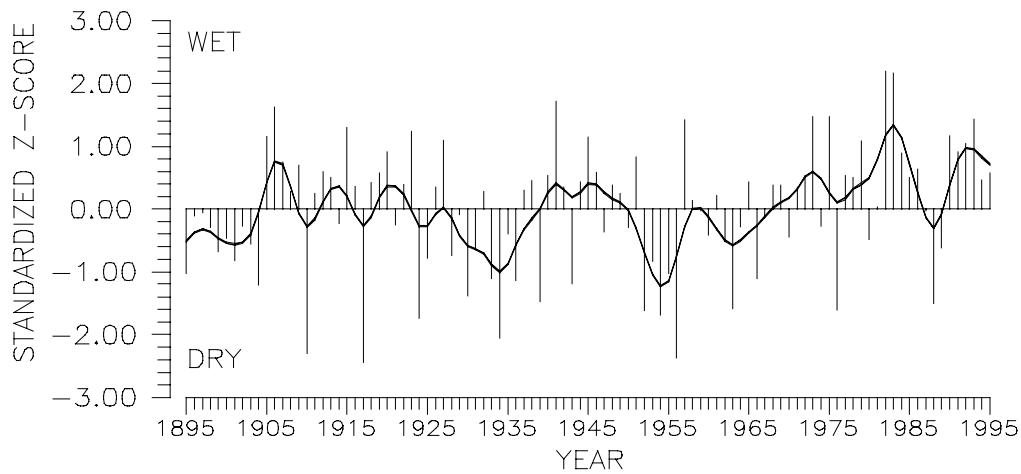


National Climatic Data Center, NOAA

THICK SMOOTH CURVE
IS 9-POINT BINOMIAL
FILTER.

Figure 12

U.S. NATIONAL NORMALIZED PRECIPITATION INDEX JANUARY–DECEMBER, 1895–1995

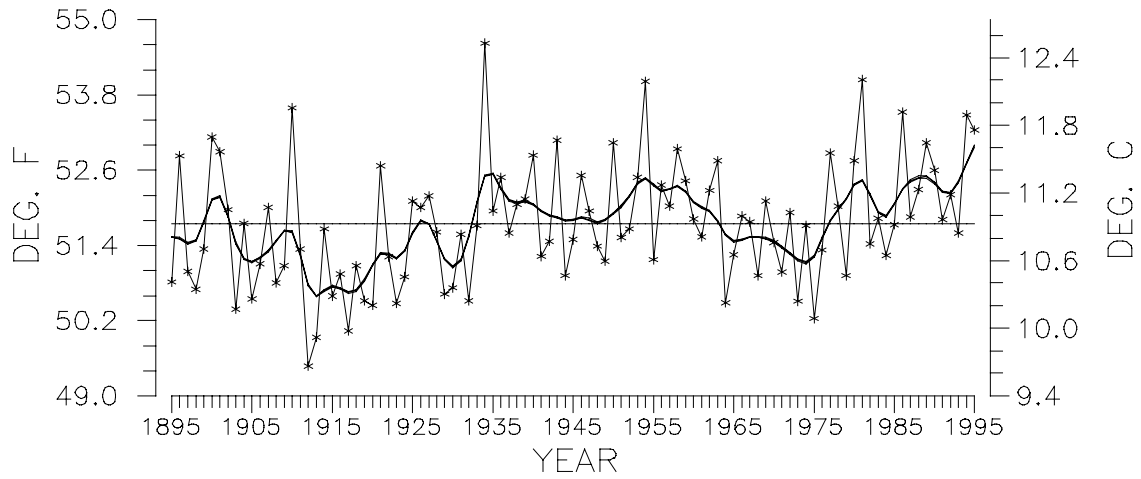


National Climatic Data Center, NOAA

THICK SMOOTH CURVE
IS 9-POINT BINOMIAL
FILTER.

Figure 13

SOUTHWEST REGION TEMPERATURE JANUARY–DECEMBER, 1895–1995

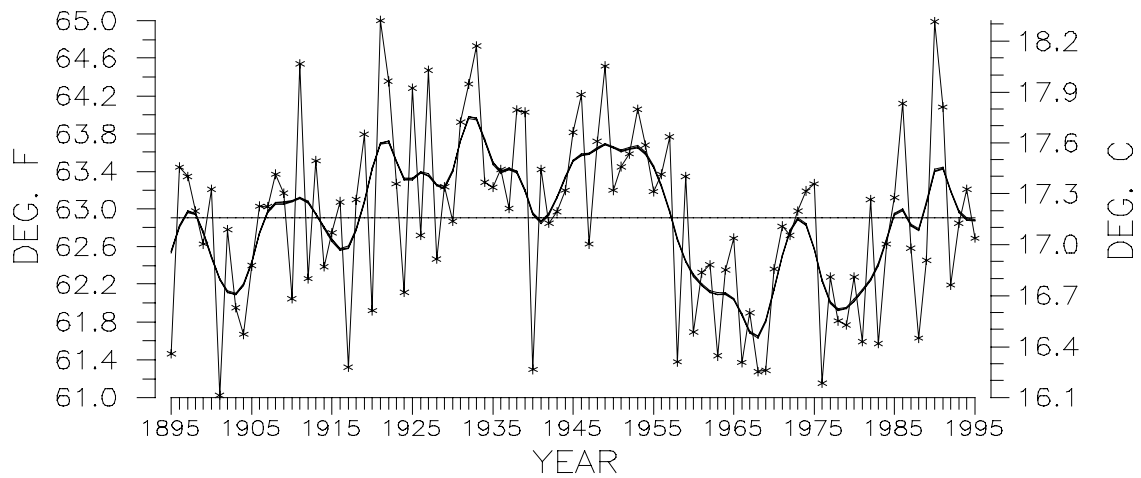


National Climatic Data Center, NOAA

THICK SMOOTH CURVE
IS 9-POINT BINOMIAL
FILTER.

Figure 14

SOUTHEAST REGION TEMPERATURE JANUARY–DECEMBER, 1895–1995

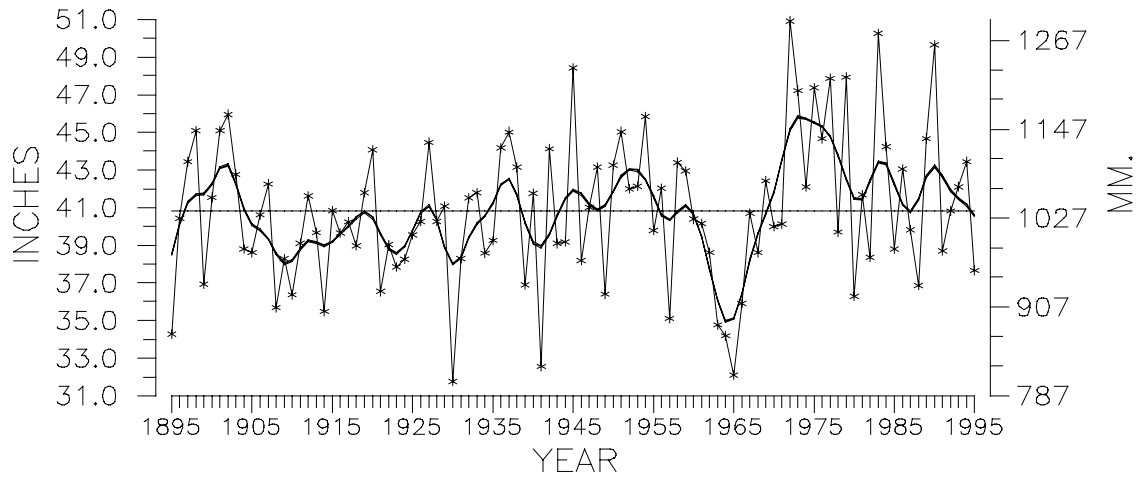


National Climatic Data Center, NOAA

THICK SMOOTH CURVE
IS 9-POINT BINOMIAL
FILTER.

Figure 15

NORTHEAST REGION PRECIPITATION JANUARY–DECEMBER, 1895–1995

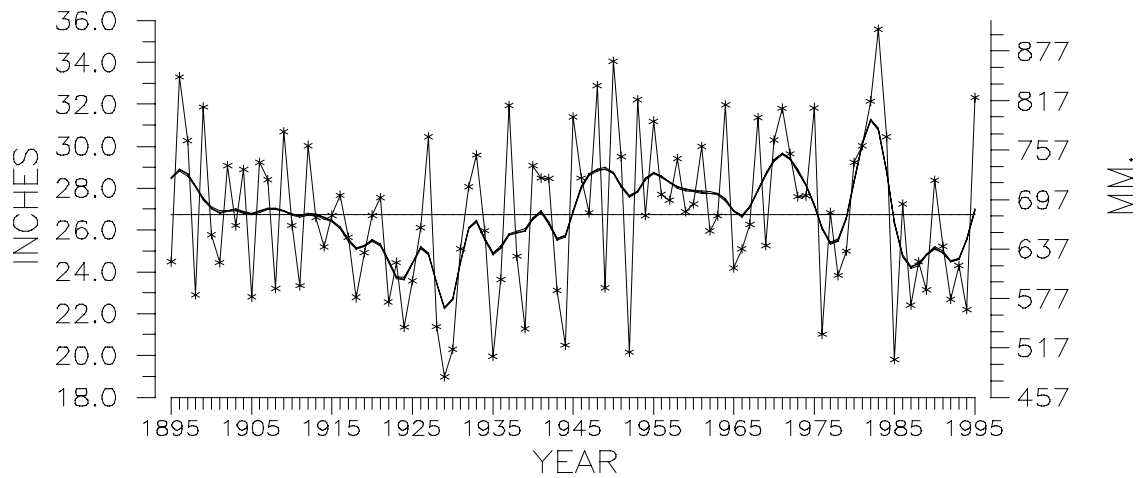


National Climatic Data Center, NOAA

THICK SMOOTH CURVE
IS 9-POINT BINOMIAL
FILTER.

Figure 16

NORTHWEST REGION PRECIPITATION JANUARY–DECEMBER, 1895–1995

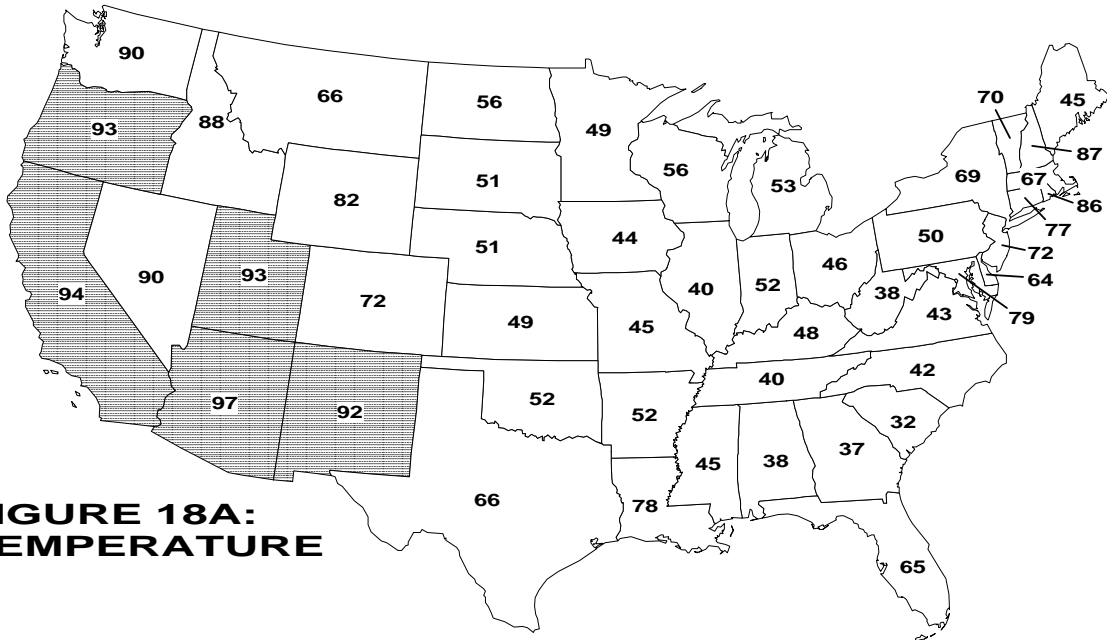


National Climatic Data Center, NOAA

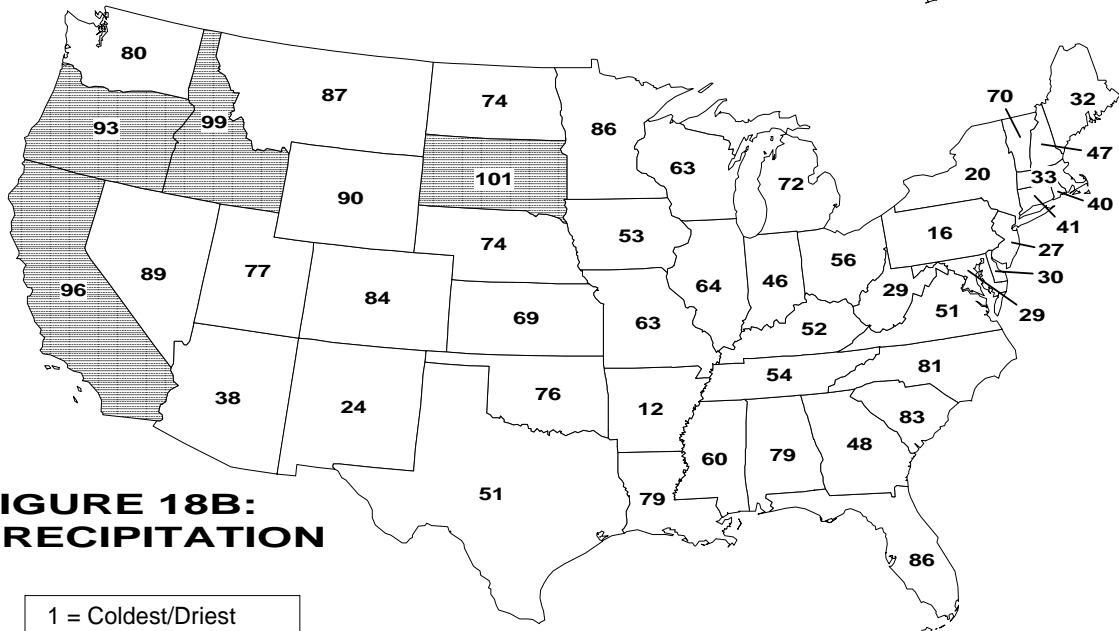
THICK SMOOTH CURVE
IS 9-POINT BINOMIAL
FILTER.

Figure 17

JAN-DEC 1995 STATEWIDE RANKS



**FIGURE 18A:
TEMPERATURE**



**FIGURE 18B:
PRECIPITATION**

1 = Coldest/Driest
101 = Warmest/Wettest

National Climatic Data Center, NOAA

Temperature and Precipitation Ranks for the contiguous United States. Each state is ranked based on its data from 1895-1995. States having a rank of top ten coldest or driest (rank 1-10) or top ten warmest or wettest (rank 92-101) are shaded.

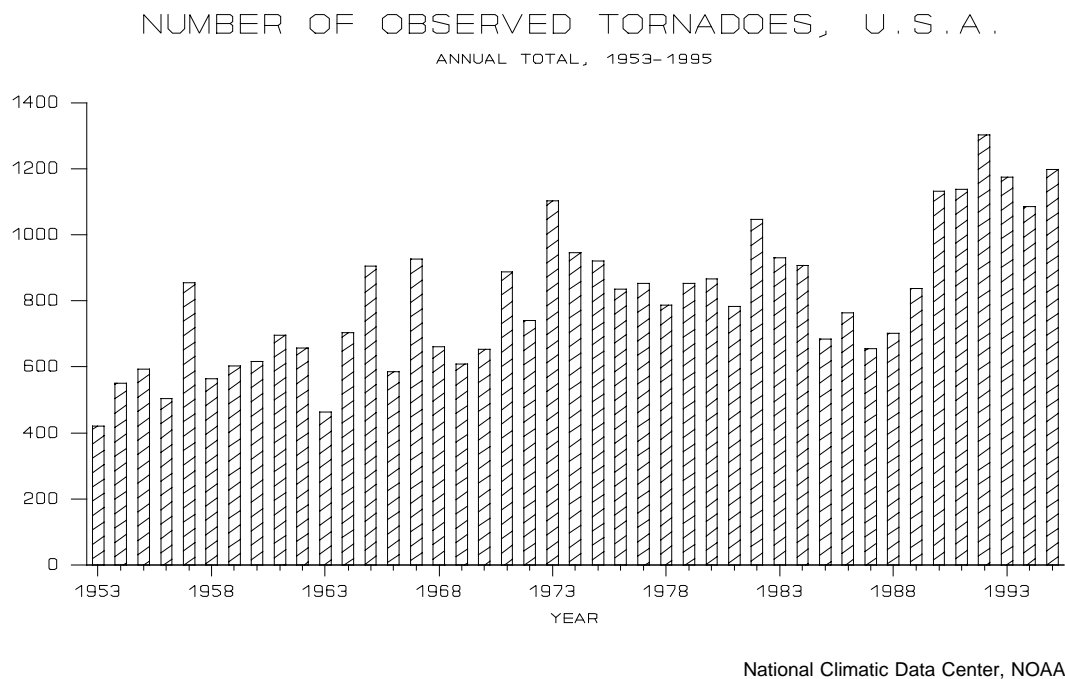


Figure 19

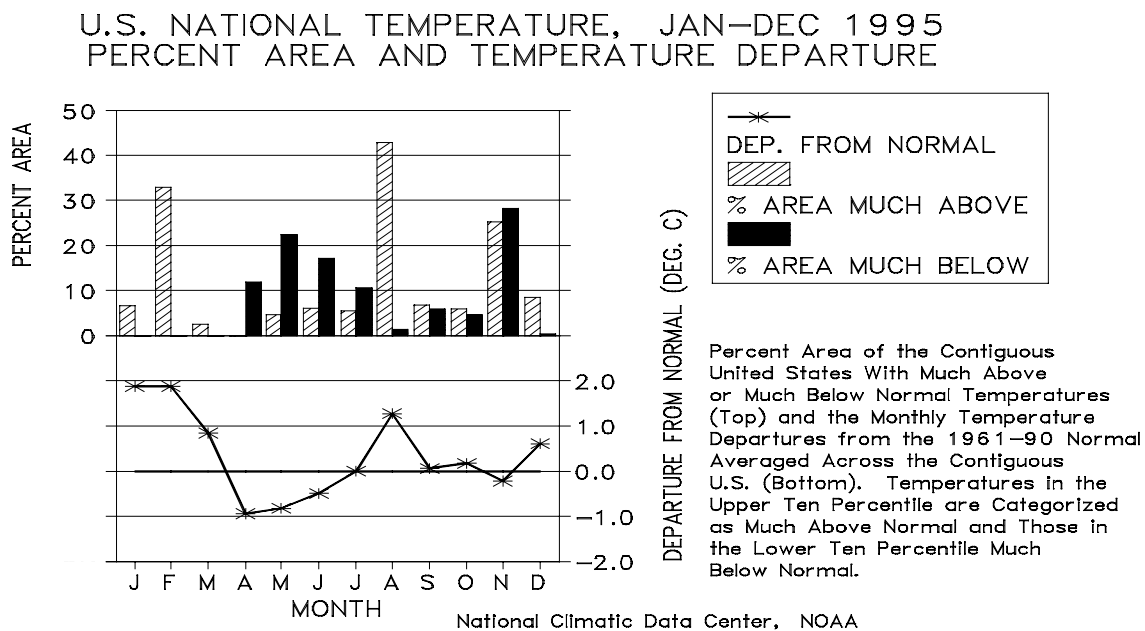


Figure 20

U.S. NATIONAL PRECIPITATION, 1995 PERCENT AREA AND PRECIPITATION INDEX

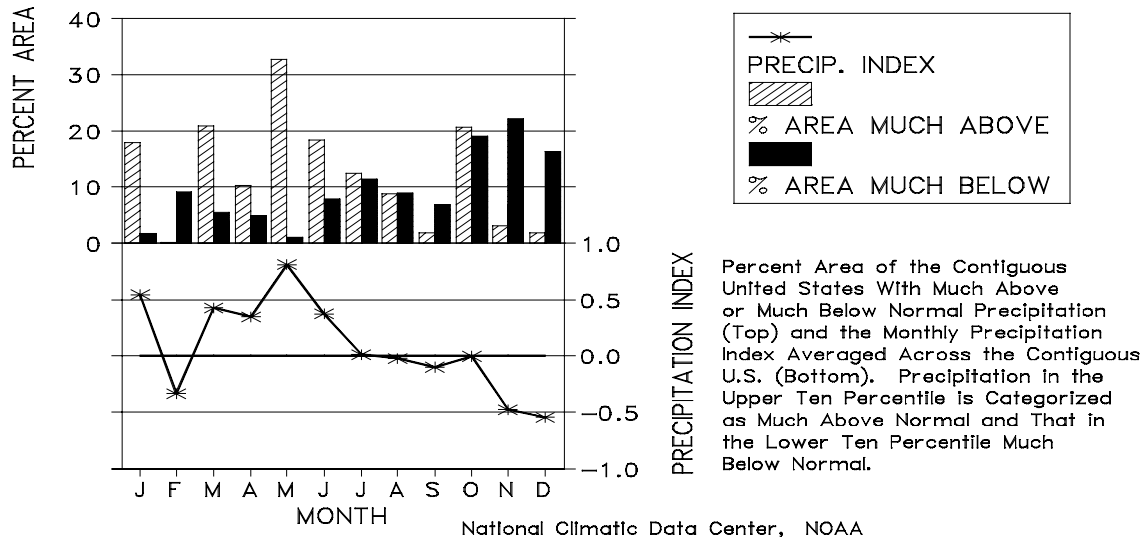


Figure 21

HURRICANES & TROPICAL STORMS NORTH ATLANTIC, 1886-1995

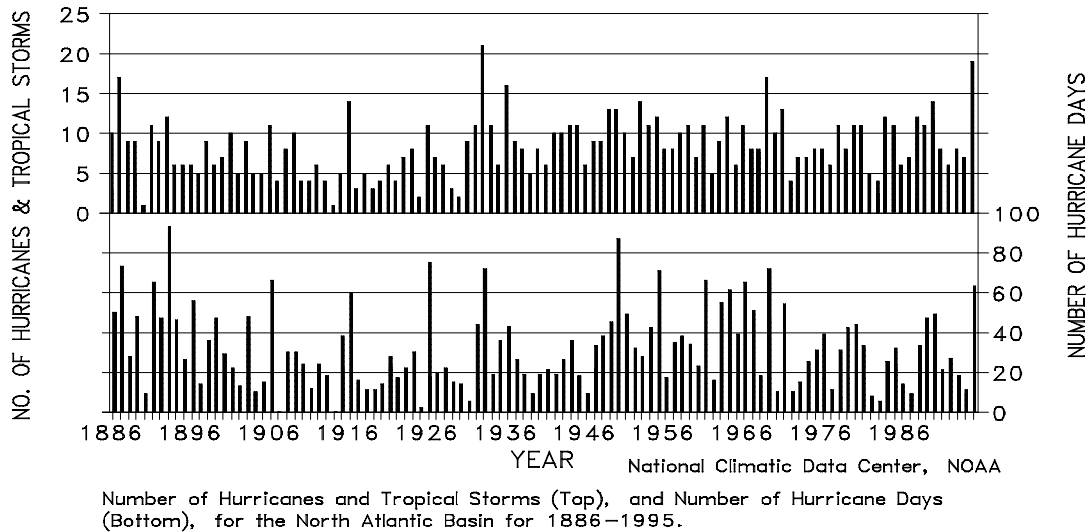


Figure 22